

SEQUENCE LISTING

<110> Pavan, William J.
 Loftus, Stacie K.
 The Government of the United States of America
 as represented by The Secretary of the
 Department of Health and Human Services

<120> Alteration of RAB38 Function to Modulate Mammalian
 Pigmentation

<130> 015280-148100US

<140> US 10/501,611
 <141> 2004-07-14

<150> US 60/349,929
 <151> 2002-01-18

<150> WO PCT/US03/01622
 <151> 2003-01-17

<160> 28

<170> PatentIn Ver. 2.1

<210> 1
 <211> 8
 <212> DNA
 <213> Mus musculus

<220>
 <223> Rab38 sequence of wildtype allele in C57Bl6/J +/+
 DNA

<400> 1
 ctgggtgt 8

<210> 2
 <211> 8
 <212> DNA
 <213> Mus musculus

<220>
 <223> Rab38 sequence of chocolate (cht) mutant allele in
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<400> 2
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<210> 3
 <211> 34
 <212> PRT
 <213> Homo sapiens

<220>
 <223> human RAB38 highly conserved N-terminal region

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Asp Leu Gly Val Gly Lys Thr Ser Ile Ile Lys Arg Tyr Val His Gln
 20 25 30

Asn Phe

<210> 4
 <211> 34
 <212> PRT
 <213> Rattus norvegicus

<220>
 <223> rat RAB38 highly conserved N-terminal region

<400> 4
 Met Gln Thr Pro His Lys Glu His Leu Tyr Lys Leu Leu Val Ile Gly
 1 5 10 15

Asp Leu Gly Val Gly Lys Thr Ser Ile Ile Lys Arg Tyr Val His Gln
 20 25 30

Asn Phe

<210> 5
 <211> 34
 <212> PRT
 <213> Mus musculus

<220>
 <223> mouse RAB38 highly conserved N-terminal region

<400> 5
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Asp Leu Gly Val Gly Lys Thr Ser Ile Ile Lys Arg Tyr Val His Gln
 20 25 30

Asn Phe

<210> 6
 <211> 47
 <212> PRT
 <213> Homo sapiens

<220>
 <223> human RAB3a N-terminal region

<400> 6
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Gln Asn Phe Asp Tyr Met Phe Lys Ile Leu Ile Ile Gly Asn Ser Ser
 20 25 30

Val Gly Lys Thr Ser Phe Leu Phe Arg Tyr Ala Asp Asp Ser Phe
 35 40 45

<210> 7
 <211> 45
 <212> PRT
 <213> Homo sapiens

<220>
 <223> human RAB5 N-terminal region

<400> 7
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Lys Ile Cys Gln Phe Lys Leu Val Leu Leu Gly Glu Ser Ala Val Gly
 20 25 30

Lys Ser Ser Leu Val Leu Arg Phe Val Lys Gly Gln Phe
 35 40 45

<210> 8
 <211> 28
 <212> PRT
 <213> Homo sapiens

<220>
 <223> human N-RAS N-terminal region

<400> 8
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Ser Ala Leu Thr Ile Gln Leu Ile Gln Asn His Phe
 20 25

<210> 9
 <211> 1439
 <212> DNA
 <213> Homo sapiens

<220>
 <223> Rab38 cDNA

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 gcttcgtagg atgggtttgaa acatcagcca aggaaaacat aaacattgat gaagcctcaa 600
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<220>
<223> Rab38 exon 1 and surrounding intron sequence

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acaaaaactt ctctcgcac taccgggcca ccattggtgt ggacttcgcg ctgaagggtgc 240
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<210> 11
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<212> DNA
<213> Homo sapiens

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<220>
<223> Rab38 exon 2

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<400> 11
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ttgtttttga tgtcaccaga ccagccacat ttgaagccgt ggcaaagtgg aaaaatgatt 120
tggactcaaa gttaacgctc cctaattgga agccagtgtc agtggttctg ttggccaaca 180
aatgtgacca agggaaggat gtgcttatga acaatggact caagatggac cagttctgca 240
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<210> 12
<211> 868
<212> DNA
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<220>
<223> Rab38 exon 3 and surrounding intron sequence

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<400> 12
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ggttgtcagc tgctctggct gtgccaaatc ctagaaggct cctctgctgg catatgacag 180
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gcgtcaggat agggaagcac atgtgacaag ccaaagatac atgactgtat ggttcctgtc 300
aaagaggaa agcaaagtgt ctttatgtgt tttccacccc catcagcaca gtgtttacaa 360
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accattcatg gtagacctaa gggttgkctg tgatgtttct cttcagagtc gtgtgcacag 660
gcagcctggg cttttgttgt cacttgctgt gccctgaatg ctggtttaac tgaaaactgt 720
atggaaagat ctgctccctg tatgtgcctt tctttcagct tcctctgact caagctgcag 780
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<210> 13
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:TYRP15'T3F

<400> 13
gcgcgaatta accctcacta aagggtctga gcacccctgt cttct 45

<210> 14
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:TYRP15'T7R

<400> 14
gcgcgtaata cgactcacta tagggcccag ttgcaaaatt ccagt 45

<210> 15
<211> 47
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:MLSN R T7

<400> 15
gcgggtaata cgactcacta taggggccac aaacatgtcc tacttac 47

<210> 16
<211> 44
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:MLSN FT3

<400> 16
gcgcgaatta accctcacta aagggaagct tccggactct ctac 44

<210> 17
 <211> 21
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:PCR
 amplification primer Rab38 Ex1F

 <400> 17
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 <210> 18
 <211> 21
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:PCR
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 <400> 18
 gaactcctca tggetcactc c 21

 <210> 19
 <211> 26
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:PCR
 amplification primer Rab38 Ex2F

 <400> 19
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 <210> 20
 <211> 25
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:PCR
 amplification primer Rab38 Ex2R

 <400> 20
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 <210> 21
 <211> 26
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:PCR
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<400> 21
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<210> 22
 <211> 25
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:PCR
 amplification primer Rab38 Ex3R

<400> 22
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<210> 23
 <211> 21
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:amplification
 primer cht Ex1F

<400> 23
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<210> 24
 <211> 21
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:amplification
 primer cht Ex1R

<400> 24
 ccagcaatgt cccagagctg c 21

<210> 25
 <211> 49
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:PCR
 amplification att site linker primer AttB1-RRab

<400> 25
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<210> 26
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 <212> DNA
 <213> Artificial Sequence

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<220>
<223> Description of Artificial Sequence:PCR
        amplification att site linker primer
        AttB2-RRab-STP

<400> 26
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<210> 27
<211> 15
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:oligonucleotide
        complementary to segment of RAB38 mRNA translation
        initiation codon

<400> 27
aacgttgagg ggcatt 15

<210> 28
<211> 1412
<212> DNA
<213> Homo sapiens

<220>
<223> human RAB38 DNA sequence

<400> 28
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